

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
29 September 2005 (29.09.2005)

PCT

(10) International Publication Number  
**WO 2005/090525 A1**

(51) International Patent Classification<sup>7</sup>: **C10G 45/64,**  
C07C 4/18

[IT/IT]; Via P.E. Venturini 152, I-30015 Chioggia-Venezia (IT). **BOSCOLO BOSCOLETTO, Angelo** [IT/IT]; Viale Veneto 35, I-30019 Sottomarina-Venezia (IT).

(21) International Application Number:  
PCT/EP2005/001259

(74) Agents: **DE GREGORI, Antonella** et al.; Ing. Barzano' & Zanardo Milano S.p.A, Via Borgonuovo, 10, I-20121 Milan (IT).

(22) International Filing Date: 8 February 2005 (08.02.2005)

(25) Filing Language: English

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(26) Publication Language: English

(30) Priority Data:  
MI2004A000554 23 March 2004 (23.03.2004) IT

(71) Applicant (for all designated States except US):  
**POLIMERI EUROPA S.p.A.** [IT/IT]; Via E. Fermi 4, I-72100 Brindisi (IT).

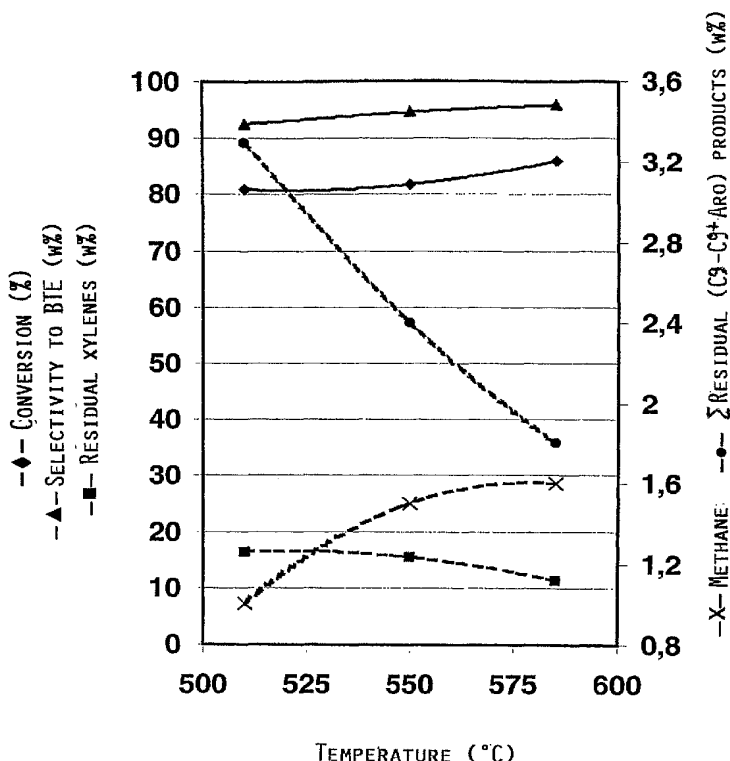
(72) Inventors; and

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

(75) Inventors/Applicants (for US only): **ARCA, Vittorio**

[Continued on next page]

(54) Title: PROCESS FOR THE SELECTIVE CATALYTIC HYDRODEALKYLATION OF ALKYLAROMATIC HYDROCARBONS



(57) Abstract: Process for the catalytic hydrodealkylation alone of hydrocarbon compositions comprising C<sub>8</sub>-C<sub>13</sub> alkylaromatic compounds, optionally in a mixture with C<sub>4</sub>-C<sub>9</sub> aliphatic and cycloaliphatic products, including the treatment in continuous of said hydrocarbon compositions, in the presence of water, with a catalyst consisting of a ZSM-5 zeolite as such or in bound form, wherein the molar ratio Si/Al in the ZSM-5 ranges from 5 to 35, modified with at least one metal selected from those belonging to groups IIB, VIB and VIII, at a temperature ranging from 400 to 700°C, a pressure of between 2 and 4 MPa, a molar ratio between water and the charge in the feed to the reactor ranging from 0.0006 to 0.16 (i.e. between 0.01 and 2.5% w/w) and a molar ratio H<sub>2</sub>/charge of between 3 and 6.



GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*